

Appln. No. 09/160,604
Amendment dated September 23, 2004
Reply to Office Action of July 7, 2004

Listing of Claims:

Claim 1 (Previously Presented). An auto focusing apparatus comprising:

an image pickup section which has an imaging plane on which a subject image is formed, and generates an image signal;

5 a focusing section for selectively executing: (i) an ordinary mode of reading an image signal from an entirety of the imaging plane of said image pickup section and performing focusing at an ordinary frame rate, and (ii) a high speed mode of reading an image signal from a predetermined portion of the
10 imaging plane of said image pickup section and performing focusing at a high speed frame rate;

an operation section for instructing a release operation; and

a control section for preferentially selecting the high
15 speed mode depending on an image signal from the predetermined portion of the imaging plane, first after a start of the release operation, and for selecting the ordinary mode depending on an image signal from the entirety of the imaging plane, when the control section determines to fail to allow the focusing in the
20 high speed mode.

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Claim 2 (Withdrawn). An apparatus according to claim 1,
wherein said focusing section determines brightness of a subject
on the basis of the image signal, and selects the high speed mode
and the ordinary mode in accordance with a first brightness and a
5 second brightness lower than the first brightness, respectively.

Claim 3 (Withdrawn). An apparatus according to claim 1,
wherein said focusing section detects a battery remaining
quantity, and selects the high speed mode and the ordinary mode
in accordance with a first magnitude of the remaining quantity
5 and a second magnitude lower than the first magnitude,
respectively.

Claim 4 (Cancelled).

Claim 5 (Withdrawn). An apparatus according to claim 1,
wherein said image pickup section includes a focusing lens for
focusing a subject image on the imaging plane, drives the
focusing lens at an ordinary frame rate in the ordinary mode, and
5 drives the focusing lens at a high speed frame rate in the high
speed mode.

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Claim 6 (Withdrawn). An apparatus according to claim 5, wherein said focusing section drives the focusing lens at 1/30 sec intervals in the ordinary mode, and drives the focusing lens at 1/60 sec intervals in the high speed mode.

Claim 7 (Withdrawn). An apparatus according to claim 5, wherein said focusing section calculates an evaluation value in an in focus state on the basis of the image signal from the entirety of the imaging plane, and sets the focusing lens at a position corresponding to a peak of a plurality of evaluation values obtained with movement of the focusing lens in the ordinary mode.

Claim 8 (Withdrawn). An apparatus according to claim 5, wherein said focusing section calculates an evaluation value in an in focus state on the basis of an image signal from a central portion of the imaging plane, and sets the focusing lens at a position corresponding to a peak of a plurality of evaluation values obtained with movement of the focusing lens in the high speed mode.

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Claim 9 (Withdrawn). An apparatus according to claim 8,
 wherein said focusing section includes a gate circuit for
 receiving an image signal from the predetermined portion and
 discarding an image signal from a portion other than the
 5 predetermined portion at a high rate in the high speed mode, and
 means for evaluating an in focus state on the basis of the image
 signal from the predetermined portion.

Claim 10 (Withdrawn). An apparatus according to claim 1,
 wherein said focusing section sets a small display area of an
 auto focusing area of a finder in the high speed mode, and sets a
 large display area of the auto focusing area of the finder in the
 5 ordinary mode.

Claim 11 (Withdrawn). An apparatus according to claim 1,
 wherein said image pickup section includes a focusing lens for
 focusing a subject image on the imaging plane, and said focusing
 section decreases a feed amount of the focusing lens per frame
 5 interval in the high speed mode, and increases a feed amount of
 the focusing lens per frame interval in the ordinary mode.

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Claim 12 (Withdrawn). An apparatus according to claim 1,
wherein said image pickup section includes a focusing lens for
focusing a subject image on the imaging plane, and said focusing
section sets a feed amount of the focusing lens per unit time in
5 the high speed mode to be larger than that in the ordinary mode.

Claim 13 (Withdrawn). An apparatus according to claim 1,
wherein said focusing section includes an evaluation value memory
for storing an autofocus evaluation value, and means for
accessing said evaluation value memory from address 0 regardless
5 of whether said focusing section is driven in the ordinary mode
or the high speed mode.

Claim 14 (Withdrawn). An apparatus according to claim 1,
wherein said focusing section includes a display unit for
displaying a picture, and means for always displaying an image
obtained immediately before setting of the high speed mode on
5 said display unit in the high speed mode, and displaying a motion
picture on said display unit in the ordinary mode.

Claim 15 (Withdrawn). An apparatus according to claim 1,
wherein said focusing section sets a number of frames driven at a

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high speed frame rate to an even number when the high speed mode is switched to the ordinary mode.

Claim 16 (Previously Presented). An apparatus according to claim 1, wherein the control section includes a processor which determines to fail to allow the focusing in the high speed mode by checking whether a peak value of an auto-focusing
5 evaluation value is indefinite due to an error.

Claim 17 (Cancelled).

Claim 18 (Previously Presented). An apparatus according to claim 1, wherein the control section determines whether the release operation is canceled when the focusing is determined, and executes the focusing when the release operation is
5 cancelled.

Claim 19 (Previously Presented). An apparatus according to claim 1, wherein the control section determines whether the release operation is canceled when the focusing is determined, and determines whether to perform another release operation when
5 the release operation is not cancelled.

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Claim 20 (Cancelled).